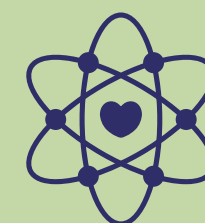
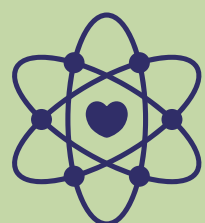




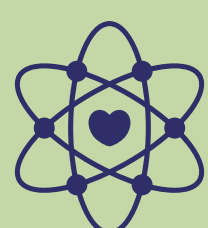
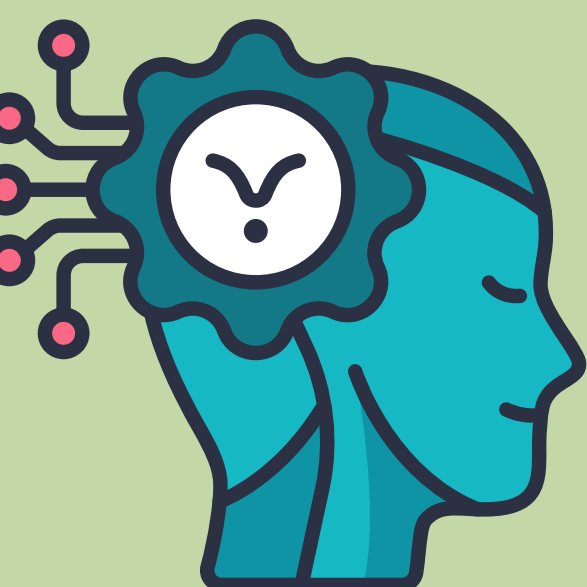
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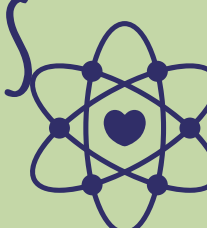
LET'S HAVE FUN!!



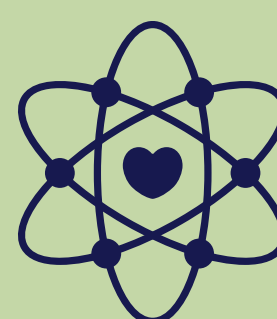
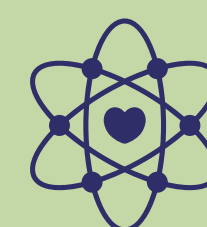
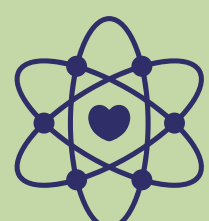
# INTRODUCING SCIENTIFIC METHODS: SAMPLE LESSON PLANS



HOW TO BRING IT TOGETHER IN A SERIES OF LESSONS



RESOURCES LINKED IN DOCUMENT



## **BACKGROUND NOTE TO TEACHERS**

**AS WITH ALL RESOURCES, THESE LESSONS ARE A SUGGESTION AND TEACHERS ARE FREE TO MODIFY AND ADAPT TO THEIR CONTEXT.**

### **Purpose:**

Introducing and/or reviewing some of the skills necessary for the investigation cycle in the scientific method. This series of lessons focuses on predicting, observing and making conclusions. These skills are taught and assessed in grade 1 throughout the year but would also be a good starting point for review in grades 2 & 3 as they will continue using these skills in their investigation cycle.

Reminder: September is about introducing and helping students become familiar with the skills (what it means and criteria). These skills will continuously be taught and assessed as they conduct investigations with other organizing ideas throughout the year as the application of the skills, in context, is the most important part.

### **Materials**

- Anchor Chart Paper
- Book (Youtube) CeCe Loves Science or Ada Twist the Scientist

### **Suggested Time Frame**

2-3 day



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## EXAMPLE LEARNING ENGAGEMENT:

### DAY 1: WHAT DO SCIENTISTS DO?

TIME: 10 MINUTES

#### ENGAGE- ACTIVATE PRIOR KNOWLEDGE

**Purpose:** To Elicit student thinking orientate them towards the skills scientists use

#### LEARNING GOAL:

I am learning about the skills that scientists use so that I can use these skills when we investigate like scientists

- On anchor chart or slide pose and read question to students “What do you think scientists do?”
- Students Think-Pair-Share – response to question
- Record responses on chart - optional students can either draw/write on sticky to add to anchor chart after.
- Let students know we will be listening to a story or watching a video on what scientists do so we need to listen carefully to add what is missing to our chart
- Read or show video of story to students
- After reading students can think-pair-share add 1 new thing scientists do on anchor chart



EXPLORE: OBSERVATIONS

**Purpose:** Review and develop a foundational skill in the investigation cycle of “Making Observations.” Observations are what allow scientists to notice phenomena (event, situations) that cause them to wonder why or how it is happening or what caused it. The observation and question sparks the road to an investigation.

Observations are also part of small-scale investigations where students are testing something to find an answer. See chart below for grade specific lessons .

Grade 1 Lesson	Grade 2 & 3 Lesson
<p>Purpose:</p> <ul style="list-style-type: none"><li>• In the new curriculum, Kindergarten learns to use the 5 senses to explore objects &amp; how shapes, and texture are ways to describe the properties of these objects. In the fall 2023, students entering grade 1 will not have this background knowledge.</li><li>• Starting with senses and ways to describe properties (color, shape and texture) is a good point to start in grade 1 to review and provide the vocabulary to make good observations (describe what they notice using 5 senses)</li><li>• We live in a 3-dimensional world and these properties will help students describe the world around them in other organizing ideas (matter, energy, earth systems and living systems)</li></ul>	<p>Purpose:</p> <ul style="list-style-type: none"><li>• This lesson plan reviews observations but also helps students consider criteria of making good observations.</li><li>• This would be an excellent opportunity to co-construct criteria, of a good observation, with students as they reflect on what is needed to make better observations.</li><li>• This lesson engagement provides the teacher with an opportunity to find out what observational skills students have or lack.</li><li>• For example:<ul style="list-style-type: none"><li>◦ Do the students focus on describing shape and color but forget texture?</li><li>◦ Do the students lack vocabulary to describe certain features (properties)?</li></ul></li><li>• The answer to the above questions will determine the next steps to review with your class before launching into grade level expectations</li></ul>
<a href="#">Grade 1 Lesson Link</a>	<a href="#">Grades 2 &amp; 3 Lesson Link</a>

Day 3 & As needed –

**Goal:** Distinguish between observation and Inference. Students often jump to conclusions (inferences) by naming the object or situation. “The grass died” is an inference instead of “the grass is brown and wrinkled” (observation). This learning engagement helps students focus on making detailed descriptions, so others can infer what is being described.

Procedure: [See/think Linked](#)

- Scaffold as necessary for your context and grade level.
- Use the gradual release of responsibility for a few days
- I think (teacher) - I see something that is black and white with fins. students select whale from pictures
- We think together - student describes and the class guesses. Teacher prompt with questions if students
- We think in partners – students can work in partners and choose various secret objects around the room to describe.
- I think – students can draw or write 1 mystery object in the classroom on a card for a class game throughout the year

Variations on this could be feel/think or hear/think with mystery objects